

From: Cynthia Giles-AA/DC/USEPA/US
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To: Adam Kushner/DC/USEPA/US@EPA; Bernadette Rappold/DC/USEPA/US@EPA
CC: David Bloomgren/DC/USEPA/US@EPA
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News Headline: Gushers highlight gas potential of Pa.'s Marcellus Shale; drillers boost production estimates | 

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ALLENTOWN, Pa. (AP) Two unexpected gushers in northeastern Pennsylvania are helping to illustrate the enormous potential of the Marcellus Shale natural gas field.

Each of the Cabot Oil & Gas Corp. wells in Susquehanna County is capable of producing 30 million cubic feet per day believed to be a record for the Marcellus and enough gas to supply nearly 1,000 homes for a year. The landowners attached to the wells, who leased the well access, numbering fewer than 25, are splitting hundreds of thousands of dollars in monthly royalties.

"There was definitely excitement among the team that planned out these wells and executed their completion," said Cabot spokesman George Stark.

Drilling companies knew the Marcellus held a lot of gas. They just had to figure out a way to get it out, and they say they're getting better at it all the time.

The result is that the Marcellus, a rock formation beneath Pennsylvania, New York, West Virginia and Ohio, has turned out to be an even more prolific source of gas than anyone anticipated. Energy firms are boosting their production targets, not only because new wells are coming on line but also because they're managing to coax more gas from each well.

Operators say they have a greater understanding of the complicated geology of the Marcellus, allowing them to land their drill bits in the sweet spot of the formation. They're drilling horizontally at greater distances, giving them access to more of the gas locked within the rock. And they're tweaking how they break apart the shale.

"It's like batting practice," said Matt Pitzarella, spokesman for Range Resources Corp. "The more you swing the bat, the better you get."

Fort Worth, Texas-based Range has boosted its estimate of the amount of natural gas it will ultimately be able to harvest from its Marcellus Shale wells, telling investors this month that it plans to triple production to 600 million cubic feet per day by the end of 2012.

Another major player, Chesapeake Energy Corp., has likewise reported a dramatic increase in expected well production. Early on, the Oklahoma City-based driller predicted that each well would yield 3.5 billion cubic feet of gas over its life span. That amount has since doubled, to more than 7 billion cubic feet, and continues to go up.

"Growing confidence in reserve quality is a major reason why many of the largest, most-successful, domestic and international energy companies are heavily investing in the Marcellus and other American shale plays," said Jeff Fisher, Chesapeake's senior vice president of production.

Indeed, major oil companies like Chevron Corp., Exxon Mobil Corp. and Royal Dutch Shell PLC have placed multibillion-dollar bets on the Marcellus, a 400-million-year-old rock formation that geologists say holds the nation's largest reservoir of natural gas and perhaps the second-largest in the world.

To unlock the shale's riches, drillers combine horizontal drilling with hydraulic fracturing, a technique known as fracking that pumps millions of gallons of water, along with sand and chemicals, into the well to creature fissures in the rock and allow natural gas to flow up. Fracking has raised environmental concerns, and the U.S. Environmental Protection Agency is studying its impact on groundwater. The industry insists the process is environmentally safe.

The technology has unleashed a drilling frenzy in Pennsylvania where more than 3,300 Marcellus wells have been sunk the past few years and accounts for a twelvefold increase in U.S. shale gas production since 2000. Gas harvested from the Marcellus and other shale fields around the country including the Barnett Shale in Texas and the Haynesville Shale in Louisiana now represents a quarter of total U.S. natural gas production.

The new Cabot wells help illustrate why boosters believe the gas field could help steer U.S. energy policy for decades to come. They were also a nice bit of good news for Cabot, the Houston-based driller that endured two years of bad publicity after state regulators accused it of polluting water supplies in Dimock Township, Susquehanna County.

The wells also located in Dimock are "producing like gushers," exulted Stark, the Cabot spokesman, helping to push the company's daily production above 400 million cubic feet per day.

Like other drillers, Cabot has steadily increased the horizontal length of its wells, from an average of 2,100 feet in 2008 to 3,600 feet last year. It has seen a corresponding increase in capacity.

Capacity, though, does not always translate to production.

Cabot's wells, and Marcellus wells in general, are not running at full tilt, mainly because the infrastructure required to take the gas from wellhead to market is not yet fully in place. An oversupply of natural gas and the availability of crews to fracture the wells are other limiting factors.

"We certainly have had to manage our pace of drilling with the installation of pipeline infrastructure and demand in the market," Chesapeake's Fisher said in a statement. "While some delays in production startups are common in the early phase of these large-scale plays, the industry is working hard to build the infrastructure that will enable Marcellus reserves to get to market for decades to come."

The Marcellus isn't the only shale formation in Pennsylvania that energy companies have their eye on. Drillers are just beginning to explore the gas-bearing Utica and Upper Devonian formations. The Utica is deeper that the Marcellus, and the Upper Devonian is shallower.

"It's triple the resource potential under the same plot of land," said Kevin Cabla, an energy analyst at Raymond James & Associates.

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Cynthia Giles
Assistant Administrator
U.S. EPA, Office of Enforcement and Compliance Assurance
1200 Pennsylvania Avenue, N.W.

Washington, D.C. 20460
202-564-2440

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